



AMENDMENTS TO THE CLAIMS:

Please cancel claims 10 and 25 without prejudice or disclaimer of the subject matter therein.

Please amend claims 1 and 27 as follows:

1. (currently amended) An information recording system, comprising:

a storage medium having a plurality of adjacent tracks, each of the adjacent tracks including a plurality of storage elements that are arranged substantially along each respective track in substantially a regular manner, each track having an associated along-track direction, the storage elements being arranged substantially along first and second axes, the first axis being substantially perpendicular to the second axis, the first and second axes being each locally substantially 45° from the respective along-track directions of the tracks; and

a head disposed in proximity to the storage medium and having a width that substantially spans at least two adjacent tracks, and

each adjacent track spanned by the head having a different phase.

2. (original) The information recording system according to claim 1, wherein the storage medium is a magnetic storage medium, and the head is a magnetic head.

3. (original) The information recording system according to claim 2, wherein each track is located substantially in a plane within the storage medium, and

wherein at least one storage element is a magnetic domain storage element that is

substantially perpendicular to the plane in which the track in which the storage element is arranged is substantially located.

4. (original) The information recording system according to claim 2, wherein each track is located substantially in a plane within the storage medium, and

wherein at least one storage element is a magnetic domain storage element that is substantially parallel to the plane in which the track in which the storage element is substantially located.

5. (original) The information recording system according to claim 2, wherein at least a portion of the magnetic storage medium is patterned.

6. (original) The information recording system according to claim 2, wherein the magnetic storage medium is a perpendicular magnetic storage medium.

7. (cancelled)

8. (previously presented) The information recording system according to claim 2, wherein the along-track direction of the tracks is a circle.

9. (previously presented) The information recording system according to claim 2,

wherein the along-track direction of the tracks is a spiral.

10. (cancelled)

11. (original) The information recording system according to claim 2, wherein the magnetic storage medium has an areal density of at least about 64 Gbit/in².

12. (original) The information recording system according to claim 2, wherein the magnetic storage medium has an areal density of at least about 128 Gbit/in².

13. (original) The information recording system according to claim 2, wherein the magnetic storage medium has an areal density of at least about 256 Gbit/in².

14. (original) The information recording system according to claim 2, wherein the magnetic storage medium is a magnetic disk.

15. (original) The information recording system according to claim 2, wherein the magnetic storage medium is a magnetic tape.

16. (original) The information recording system according to claim 2, wherein the magnetic storage medium is a magnetic strip.

17. (original) The information recording system according to claim 2, wherein the information recording system is part of a magnetic medium disk drive.

18. (cancelled)

19. (previously presented) The information recording system according to claim 27, wherein at least a portion of the optical storage medium is patterned.

20. (cancelled)

21. (previously presented) The information recording system according to claim 27, wherein the along-track direction of the tracks is a circle.

22. (previously presented) The information recording system according to claim 27, wherein the along-track direction of the tracks is a spiral.

23. (original) The information recording system according to claim 1, wherein the head reads information from at least two adjacent tracks spanned by the head.

24. (original) The information recording system according to claim 1, wherein the

head writes information to at least two adjacent tracks spanned by the head.

25. (cancelled)

26. (original) The information recording system according to claim 1, wherein the plurality of adjacent tracks is formed by a plurality of concentric tracks.

27. (currently amended) An information recording system, comprising:
an optical storage medium having a plurality of adjacent tracks, each of the adjacent tracks including a plurality of storage elements that are arranged substantially along each respective track in substantially a regular manner, each track having an associated along-track direction, the storage elements being arranged substantially along first and second axes, the first axis being substantially perpendicular to the second axis, the first and second axes being each locally substantially 45° from the respective along-track directions of the tracks; and

an optical head disposed in proximity to the storage medium and having a width that substantially spans at least two adjacent tracks, and
each adjacent track spanned by the head having a different phase.

Applicants respectfully request the Examiner to enter the following claim:

28. (new) An information recording system, comprising:

a storage medium having a plurality of adjacent tracks, the plurality of adjacent

tracks being formed by at least one spiral-shaped track, each of the adjacent tracks including a plurality of storage elements that are arranged substantially along each respective track in substantially a regular manner, each track having an associated along-track direction, the storage elements being arranged substantially along first and second axes, the first axis being substantially perpendicular to the second axis, the first and second axes being each locally substantially 45° from the respective along-track directions of the tracks; and

a head disposed in proximity to the storage medium and having a width that substantially spans at least two adjacent tracks.

29. (new) An information recording system, comprising:

an optical storage medium having a plurality of adjacent tracks, the plurality of adjacent tracks being formed by at least one spiral-shaped track, each of the adjacent tracks including a plurality of storage elements that are arranged substantially along each respective track in substantially a regular manner, each track having an associated along-track direction, the storage elements being arranged substantially along first and second axes, the first axis being substantially perpendicular to the second axis, the first and second axes being each locally substantially 45° from the respective along-track directions of the tracks; and

an optical head disposed in proximity to the storage medium and having a width that substantially spans at least two adjacent tracks.